

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Appln. No. 09/485,820

B1 Cmtb
formulation is a formulation selected from wettable powders, water dispersible granules and water soluble formulations.

B2
3. (Amended) The solid pesticidal formulation enveloped in a water soluble substance according to claim 1, wherein the water soluble hydroxy compound is isobutyl alcohol, ethylene glycol, propylene glycol, butylene glycol, glycerin, monoethanolamine, diethanolamine, triethanolamine, lactic acid or ethyl lactate.

REMARKS

The Office Action of October 30, 2000 has been received and its contents carefully considered.

Claims 1, 2, 7, and 11-16 have been rejected under 35 U.S.C. § 102(b) as anticipated by Japanese Patent 5-17308.

Applicants submit that JP '308 does not disclose or render obvious the presently claimed invention and, accordingly, request withdrawal of this rejection.

The present invention, as set forth in claim 1 as amended above, is directed to a solid pesticidal formulation enveloped in a water soluble substance. The solid pesticidal formulation comprises at least one water soluble hydroxy compound selected from the group consisting of alkanols, ethylene glycol, propylene glycol, tri- or more valent alcohols, alcoholamines, lactic acid and hydroxfatty acid esters. The solid pesticidal formulation is a formulation selected from wettable powders, water dispersible granules and water soluble formulations.

Thus, applicants have amended claim 1 to recite the use of ethylene glycol and propylene glycol, as disclosed at page 2, line 21, and to recite the use of lactic acid, as disclosed at page 2,

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line 24. In addition, claim 1 recites that the solid pesticidal formulation is in the form of wettable powders, wettable dispersible granules and water soluble formulations, as disclosed at page 9, lines 5-6.

Claim 1 no longer recites alkylene glycols, glycol monoethers, and hydroxyfatty acids as the water soluble hydroxy compound.

Claim 3 has been amended so that it no longer recites ethylene glycol monomethyl ether and diethylene glycol monomethyl ether as the water soluble hydroxy compound.

JP '308 relates to a pesticidal formulation packed CO₂ -evolving substance. The package has a specific gravity of one or more for dispersing the pesticidal ingredient in water without drift, when the pesticidal formulation is applied to a paddy field.

JP '308 is silent with respect to the preservation stability of the present invention and, accordingly, does not disclose or suggest the present invention.

JP '308 contains the following description.

(Translation of Paragraph [0050])

When the melting point of the pesticidal active ingredient is about 0-70°C, a solvent can be added for lowering viscosity in processing and preventing crystallization of the active ingredient in preserving at a low temperature, if necessary. Said solvents are usually non-volatile or low volatile organic solvents. The solvent used for adjusting viscosity and preventing crystallization of the active ingredient can be mixed with the active ingredient homogeneously. Examples of the solvent include aromatic hydrocarbons such as phenylxylylthane; ketones; esters; vegetable oils; mineral oils; liquid paraffin; polyethylene glycol having 200-600 of average molecular weight and being liquid at room temperature; polypropylene glycol; glycol ethers such as polypropylene glycol methyl ether and its acetate. Among them, phenylxylylthane, glycol ethers and glycol ether acetates are preferable.

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(Translation of Paragraph [0054])

Further, examples of the solid acid utilized in the present invention include citric acid, succinic acid, maleic acid, fumaric acid, tartaric acid, oxalic acid, malonic acid, malic acid, adipic acid, boric acid, sodium dihydrogenphosphate, potassium dihydrogenphosphate, benzoic acid, sulfamic acid, salicylic acid, ascorbic acid, glutamic acid, asparagic acid, sorbic acid, nicotinic acid and phenylacetic acid. Among them, maleic acid, fumaric acid, citric acid, succinic acid, boric acid, malic acid and tartaric acid are preferable. These acids may be used solely or combined two or more at any mixing ratio.

In Paragraph [0050] of JP '308, polyethylene glycol, polypropylene glycol, polypropylene glycol methyl ether and its acetate are described. Further, in Paragraph [0054], citric acid, tartaric acid and malic acid are described.

In view of these disclosures in JP '308, applicants have amended claim 1 to delete the recitations of alkylene glycols, glycol monoethers and hydroxyfatty acids, have cancelled claim 2 and claims 6, 9, 10, 13, 14 and 16 dependent on claim 2, and have amended claim 3 as discussed above.

JP '308 does not disclose or suggest the solid pesticidal formulation comprised of the at least one water soluble hydroxy compound set forth in claim 1.

In the Office Action, the Examiner states that the present claims are directed to a solid pesticide enveloped in PVA, which, according to the Examiner, is an alkanol, and that JP '308 also discloses these same components. The Examiner further states that JP '308 also discloses the presence of glycol ether, glycol ether acetates, CMC and lactose.

Applicants disagree with the Examiner's description of JP '308.

In particular, the Examiner's statement that the present claims are directed to a solid pesticide enveloped in PVA (polyvinyl alcohol), which, according to the Examiner, is an alkanol,

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indicates that the Examiner has not correctly analyzed the claim language of claim 1. In particular, in the present invention as set forth in the claim 1, there is provided a solid pesticidal formulation enveloped in a water soluble substance. The solid pesticidal formulation contains at least one water soluble hydroxy compound selected from a number of named compounds, including alkanols. Thus, the recitation in claim 1 of a water-soluble hydroxy compound, which can be an alkanol is a requirement that the water soluble hydroxy compound be within the solid pesticidal formulation, and is not a recitation that the envelope can be PVA.

In contrast, the Examiner appears to be taking the position that the PVA in JP '308 is an alkanol that satisfies the recitation of claim 1 for a water soluble hydroxy compound. In JP '308, however, the PVA is a material which is employed as a water soluble film to envelope a solid pesticidal formulation, and is not present in the solid pesticidal formulation itself. Thus, the disclosure of PVA in JP '308 does not satisfy the recitation of claim 1 of a water soluble hydroxy compound in a solid pesticidal formulation.

JP '308 discloses that polyvinyl alcohol, hydroxpropylcellulose, MC, CMC, and so on are the water soluble substance (film) constituting the envelope, but these components are not components of the solid pesticidal formulation and do not satisfy the recitation of a water soluble hydroxy compound in the solid pesticidal formulation.

As the Examiner noted, JP '308 also discloses the use of lactose in the solid pesticidal formulation. Lactose, however, is not within the scope of the named water soluble hydroxy compounds set forth in claim 1.

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In summary, JP '308 does not disclose or suggest any of the water soluble hydroxy compounds set forth in claim 1 in a solid pesticidal formulation.

In view of the above, applicants submit that JP '308 defeat the patentability of the present claims and, accordingly, request withdrawal of this rejection.

Claims 1-3 and 6-16 have been rejected under 35 U.S.C. § 102(b) as anticipated by JP 5-78204.

Applicants submit that JP '204 does not disclose or render obvious the presently claimed invention and, accordingly, request withdrawal of this rejection.

JP '204 relates to a floating agricultural composition dispersed easily when applied to a paddy field.

JP '204 is silent about the preservation stability of the present invention and, accordingly, applicants submit that it does not disclose or suggest the present invention.

The abstract of JP '204 discloses a floating agricultural composition comprised of solid particles of an agricultural ingredients, an inorganic floating material, and a high boiling organic point solvent, all enclosed in a water soluble polymer film, such a PVA.

JP '204 further contains the following disclosures.

(Translation of Paragraph [0012])

Examples of the solvent having high boiling point and utilized in the present invention include polybasic acid esters such as diisobutyl adipate, dioleyl adipate, diisodecyl adipate, diethylhexyl phthalate, didecyl phthalate, 2-ethylhexyl trimellitate and triisodecyl trimellitate; fatty acid esters such as cetyl 2-ethylhexanoate, cetyl coconut fatty ester, methyl laurate, methyl myristate, methyl oleate and octyl oleate; polyvalent alcohol fatty esters, such as sorbitan monolaurate and sorbitan monooleate; higher alcohols, such as octyl alcohol and lauryl alcohol; aromatic hydrocarbons, such as methylnaphthalene; and ketones such as isophorone.

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In Paragraph [0012], JP '204 describes "higher alcohols". Although claim 1 of the present application includes alkanols, these alkanols, as recited in claim 1, are water soluble hydroxy compounds. It is well known that lower alkanols are water soluble, and higher alkanols, such as the octyl alcohol and lauryl alcohol disclosed in JP '204, are water insoluble.

Accordingly, applicants submit that JP '204 does not disclose or suggest the use of a water soluble hydroxy compound as recited in claim 1.

JP '204 also discloses polyvinyl alcohol and CMC, and so on as the water soluble substance (film) constituting the envelope, but these components are not components of the solid pesticidal formulation.

In view of the above, applicants submit that JP '204 does not defeat the patentability of the present claims and, accordingly, request withdrawal of this rejection.

Claim 1-5 and 7-16 have been rejected under 35 U.S.C. § 102(b) as anticipated by WO 9201378 to Chen et al.

Applicants submit that WO '378 does not disclose or render obvious the presently claimed invention and, accordingly, request withdrawal of this rejection.

WO '378 relates to a gel formulation. The present claims have been amended so that they are directed to wettable powders, water dispersible granules and water soluble formulations. Wettable powders are powder, water dispersible granules are granules, and water soluble formulation are powders or granules. See page 11, lines 12-13 of the present specification.

In contrast, WO '378 discloses gel formulations and does not disclose or suggest wettable powders, water dispersible granules or water soluble formulations.

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In view of the above, applicants submit that WO '378 does not defeat the patentability of the present claims and, accordingly, request withdrawal of this rejection.

Claim 1 to 16 have been rejected under 35 U.S.C. § 103(a) as obvious over WO 92-01378 to Chen et al in view of JP 5-17308.

Applicants submit that these references do not disclose or render obvious the presently claimed invention and, accordingly, request withdrawal of this rejection.

WO '378 and JP '308 each have been discussed above, and applicants rely on that discussion.

WO '378 relates to a gel formulation for use in toxic or hazardous products. WO '378 states that in the past, toxic or hazardous liquids, such as agrochemicals, have been formulated as liquid compositions that have been contained in metal drums, or plastic containers, or soluble bags or sachets. WO '378 states that the invention of WO '378 is to provide a new formulation system for agrochemicals which is easy to put in a containing system. The new formulation system of WO '378 is a gel formulation, and this gel formulation is one which can be contained in a water soluble bag or sachet. Thus, an essential element of the WO '378 patent is a gel formulation.

WO '378 does not disclose or suggest a solid pesticidal formulation containing a water soluble hydroxy compound where the solid formulation is a wettable powder, water dispersible granule or water soluble formulation, and thus does not disclose or suggest the presently claimed invention. As disclosed in the present specification at page 11, lines 12 to 13, the water soluble

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formulations of the present invention are powders or granules of solid formulation, and such are not disclosed in WO '378.

Further, applicants submit that it would not have been obvious to modify the teachings of WO '378 to formulate its composition into a wettable powder, water dispersible granule or water soluble formulation because to do so would destroy the essential teaching of WO '378 which is to provide a gel formulation.

In addition, there is no teaching or suggestion in JP '308 that would have led one of ordinary skill in the art to modify the gel formulation of WO '378.

JP '308 relates to a pesticidal formulation packed CO₂-evolving substance for application to a paddy field. As disclosed in the abstract, the JP '308 composition can be in the form of, for example, a powder, granule, tablet or capsule. There is no disclosure in JP '308 of a gel formulation, or that the formulations in JP '308 are equivalent to gel formulations, or that gel formulations can be or should be formulated into wettable powders, water dispersible granules or water soluble formulations, which are powders or granules. Accordingly, there is no teaching or disclosure that would have led one of ordinary skill in the art to modify the gel formulations of WO '378 to the form of the formulations set forth in claim 1.

In addition, since each of these reference are silent about the preservation stability that is achieved by the present invention, applicants submit that these references do not disclose or render obvious the presently claimed invention.

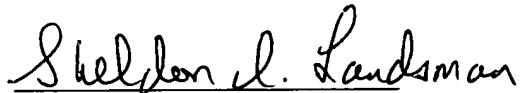
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In view of the above, applicants submit that the claims are patentable over the combination of WO '378 in view of JP '308 and, accordingly, request withdrawal of this rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,


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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 2, 6, 9, 10, 13, 14, 15, and 16 are canceled without prejudice or disclaimer of the subject matter thereof.

RECEIVED

The claims are amended as follows:

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1. (Amended) A solid pesticidal formulation enveloped in a water soluble substance
wherein the solid pesticidal formulation comprises at least one water soluble hydroxy compound selected from the group consisting of alkanols, ethylene glycol, propylene glycol, [alkylene glycols, glycol monoethers,] tri- or more valent alcohols, alcoholamines, lactic acid [hydroxyfatty acids] and hydroxyfatty acid esters and the solid pesticidal formulation is a formulation selected from wettable powders, water dispersible granules and water soluble formulations.

3. (Amended) The solid pesticidal formulation enveloped in a water soluble substance according to claim 1, wherein the water soluble hydroxy compound is isobutyl alcohol, ethylene glycol, propylene glycol, butylene glycol, [ethylene glycol monomethyl ether, diethylene glycol monomethyl ether,] glycerin, monoethanolamine, diethanolamine, triethanolamine, lactic acid or ethyl lactate.